

THE WHITE HOUSE
WASHINGTON

STAT

CABINET AFFAIRS STAFFING MEMORANDUMDate: 5/25/84 Number: 168993CA Due By: _____

Subject: Cabinet Council on Economic Affairs - Tuesday, May 29, 1984

8:45 a.m. - Roosevelt Room

ALL CABINET MEMBERS	Action	FYI	Action	FYI
Vice President	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Treasury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Defense	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attorney General	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Interior	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Agriculture	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commerce	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HHS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HUD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transportation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Counsellor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OMB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CIA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USTR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GSA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EPA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SBA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CEA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CEQ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OSTP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baker	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deaver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Darman (For WH Staffing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jenkins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mc Farlane	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Svahn	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CCCT/Gunn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCEA/Porter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCFA/	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCHR/Simmons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCLP/Uhlmann	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCMA/Bledsoe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCNRE/	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS: The Cabinet Council on Economic Affairs will meet on Tuesday, May 29th, 1984 at 8:45 a.m. in the Roosevelt Room.

The agenda and background papers are attached.

DCI
EXEC
REG

RETURN TO:

Craig L. Fuller
 Assistant to the President
 for Cabinet Affairs
 456-2823

Katherine Anderson Don Clarey
 Tom Gibson Larry Herboldsheimer
 Associate Director
 Office of Cabinet Affairs
 456-2800

L-300B-

Executive Registry

84-

2335

THE WHITE HOUSE

WASHINGTON

May 25, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON ECONOMIC AFFAIRS

FROM: ROGER B. PORTER *RBP*

SUBJECT: Agenda and Papers for the May 29 Meeting

The agenda and papers for the May 29 meeting of the Cabinet Council on Economic Affairs are attached. The meeting is scheduled for 8:45 a.m. in the Roosevelt Room.

The first agenda item is a review of the agreement reached by the Working Group on Unitary Taxation and developments since the last Working Group meeting. A memorandum from Buck Chapoton outlining the agreement and recent developments is attached.

The second agenda item is a brief report on Employment Patterns and Prospects. At the Organization for Economic Cooperation and Development Ministerial on May 17-18, many European ministers expressed considerable interest in the experience of the U.S. in generating employment growth through advances in technology. A brief paper outlining the effect of technology on employment growth or displacement is attached.

Attachments

THE WHITE HOUSE
WASHINGTON

CABINET COUNCIL ON ECONOMIC AFFAIRS

May 29, 1984

8:45 a.m.

Roosevelt Room

AGENDA

1. Unitary Taxation (CM # 214)
2. Employment Patterns and Prospects (CM # 476)



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

ASSISTANT SECRETARY

May 24, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON ECONOMIC AFFAIRS

Subject: Worldwide Unitary Taxation

This memorandum is a status report on the worldwide unitary taxation issue. The worldwide unitary method of taxation is currently used by twelve states to determine the taxable income in a particular state of a business that operates across national borders. Multinational corporations that oppose the worldwide unitary method and foreign governments allege that this method of taxation leads to state taxation of foreign source income and is at variance with the internationally-accepted separate accounting method for avoiding double taxation. Proponents of the worldwide unitary method, including state governments and some small business groups, believe that it is a more accurate and fairer way to measure the in-state income of multinationals and is necessary to deter tax evasion by multinationals.

Background

In July, 1983, a Cabinet Council on Economic Affairs (CCEA) Working Group was established to identify the federal and state government interests in the worldwide unitary method of taxation and to develop possible options. Based on that review, a series of options were developed and forwarded to the CCEA and the President for decision. On September 23, 1983, Secretary Regan announced President Reagan's decision to establish a Worldwide Unitary Taxation Working Group to make recommendations that would reconcile the concerns of the business community, the views of our international trading partners, and the interests of the individual states in maintaining their fiscal sovereignty. This Group, chaired by Secretary Regan, included three Governors, several state legislators and tax administrators, and seven chief executive officers of major corporations.

Working Group and Task Force Meetings

At its initial meeting in early November, the Working Group appointed a technical-level Task Force to study the issues and develop options for consideration by the Working Group. The Task Force held 145 hours of meetings spread over 20 days between November and mid-March. A large number of individuals or groups

-2-

representing business, the states, foreign governments, and public interest viewpoints presented testimony to the Task Force. The Task Force also received written statements in opposition to the states' use of the worldwide unitary method from the governments of Australia, Belgium, Canada, the Federal Republic of Germany, the Netherlands, Switzerland, the United Kingdom, the ten-member European Community, and from the European Commission.

At its early December meeting, the Working Group decided to reject immediate resort to restrictive federal legislation as a way of implementing any Working Group recommendations. This decision reflected the shared view of the business and state members of the Working Group that a cooperative voluntary approach based on consensus offered the best chance for obtaining a solution to this vexing problem.

At its last meeting, March 20-22, the Task Force completed its analysis of the testimony and material it received and its development of options for the Working Group. A report outlining the Task Force's activities, the issues which it identified, and the options it developed was presented to the Working Group on May 1.

Working Group Adoption of Principles

At its final meeting on May 1, the Working Group considered the six options that had been developed by the Task Force. Option One would apply solely to foreign-based multinational corporations while Options Two through Six would limit the unitary method to the water's edge. While Options Two through Six contain many common elements, they differ in several areas, most notably in the proper state tax treatment of dividends received by U.S. corporations from foreign subsidiaries and of U.S. corporations with predominantly foreign operations, so-called "80/20" corporations. Although the Working Group did not reach agreement on any of the six options, it was able to agree on a set of three principles to guide in the formulation of state tax policy:

1. water's edge unitary combination for both U.S. and foreign-based companies;
2. increased federal administrative assistance and cooperation with the states to promote full taxpayer disclosure and accountability; and
3. competitive balance for U.S. and foreign multinationals and purely domestic businesses..

Under Principle One, which would be implemented by state action rather than federal restrictions, unitary taxation would be applied solely to business activities within the United States. If states follow the water's edge recommendation, a foreign corporation not doing business in the United States would not be subject to unitary combination. Acceptance of this

-3-

Principle would meet the primary concerns of our trading partners and thus be responsive to the problem that gave rise to the creation of the Working Group.

Principle Two would commit the federal government to assist the states by undertaking specific actions to encourage greater disclosure of domestic income, increase compliance with state tax laws, and improve the enforcement of the arm's-length or separate accounting standard. In some cases, the information and help provided the states would be contingent upon state acceptance of the "water's edge" limitation. Several of these actions would require federal legislation, increased budgetary authority for the Internal Revenue Service, or both.

Principle Three suggests that state tax policy should maintain competitive balance among all business taxpayers, including foreign multinationals, U.S. multinationals, and purely domestic businesses.

While the Working Group reached a consensus on the above Principles, a number of issues, most importantly those dealing with foreign dividends and U.S. corporations with mainly foreign operations ("80/20" corporations), were not resolved. These issues will be decided on a state-by-state basis.

Working Group Report

A report from the Working Group to the President outlining this agreement in principle and summarizing the factual situation leading to the formation of the Working Group, the issues that divided the members of the Working Group, and the activities of the Working Group and its staff-level Task Force has been drafted and circulated to the Working Group members for review and comment. Provided it is approved by the Working Group members, it should be ready for delivery to the President by early June. Several state members of the Working Group believe that it is critical for the report to indicate more clearly the areas of disagreement. Those members appear to be unwilling to support a recommendation for state adoption of the water's edge principle without making it explicit that issues dealing with foreign dividends, "80/20" corporations, prospective application, tax havens, "safety valve" use of worldwide combination, and modification of a federal law governing out-of-state sales must be resolved to the satisfaction of the states. Treasury is attempting to accommodate these concerns while maintaining the support of the business members of the Working Group and the essence of the Group's agreement to adopt the principle of water's edge combination.

The implementation of the Working Group's water's edge recommendation (Principle One) is the responsibility of the individual states. There are clear signs that competition between the states for investment will spur them to act quickly. Recent action in two highly-visible worldwide unitary states

-4-

indicates this voluntary approach may be successful. In California, Governor Deukmejian and Senate Minority Leader Nielson have introduced Senate Bill 1937, which would allow tax-payers to elect to be taxed on a water's edge rather than worldwide basis. Foreign dividends received by a U.S. corporation opting for water's edge treatment would be subject to taxation. This bill is currently scheduled for committee hearing on June 15. In Florida, the state which adopted the worldwide unitary method only last year, House Bill 1309 has been reported out of committee and awaits floor action, where it is strongly supported by Speaker Moffitt, a member of the Working Group. This bill would provide for water's edge combination with taxation of foreign dividends. From the discussions in the Working Group, it is clear that taxation of foreign dividends is unacceptable to U.S.-based multinationals, even if coupled with a water's edge restriction on unitary combination. This is true because many U.S. companies could, in fact, have higher state tax liabilities under the proposed Florida legislation than under worldwide unitary. Given an election in California, these firms would select worldwide unitary over water's edge, with full taxation of dividends.

Further evidence of the competitive atmosphere between the states over the unitary issue can be found in recent statements by several state governors. Oregon Governor Atiyeh has indicated a desire to eliminate the use of worldwide unitary as part of Oregon's "very strong efforts to encourage economic development." Indiana officials have responded to the inclusion of their state in the list of the twelve worldwide unitary states by indicating that Indiana allows corporations to elect to be taxed on a worldwide basis, but that it is not nor will it be Indiana policy to require the use of the worldwide method to the detriment of the taxpayer. Governor Perpich has called for repeal of Minnesota's strictly domestic unitary method of taxation. In addition, Governor Clinton of Arkansas recently considered and rejected the adoption of the worldwide unitary method.

Foreign reaction to the Working Group's agreement has been "cautiously optimistic." While our trading partners are pleased with the water's edge recommendation, they have expressed their concern that failure to resolve the foreign dividends issue may interfere with the state adoption of the water's edge combination they seek.



John E. Chapoton
Assistant Secretary
(Tax Policy)



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

ASSISTANT SECRETARY

May 24, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON ECONOMIC AFFAIRS

Subject: Worldwide Unitary Taxation

This memorandum is a status report on the worldwide unitary taxation issue. The worldwide unitary method of taxation is currently used by twelve states to determine the taxable income in a particular state of a business that operates across national borders. Multinational corporations that oppose the worldwide unitary method and foreign governments allege that this method of taxation leads to state taxation of foreign source income and is at variance with the internationally-accepted separate accounting method for avoiding double taxation. Proponents of the worldwide unitary method, including state governments and some small business groups, believe that it is a more accurate and fairer way to measure the in-state income of multinationals and is necessary to deter tax evasion by multinationals.

Background

In July, 1983, a Cabinet Council on Economic Affairs (CCEA) Working Group was established to identify the federal and state government interests in the worldwide unitary method of taxation and to develop possible options. Based on that review, a series of options were developed and forwarded to the CCEA and the President for decision. On September 23, 1983, Secretary Regan announced President Reagan's decision to establish a Worldwide Unitary Taxation Working Group to make recommendations that would reconcile the concerns of the business community, the views of our international trading partners, and the interests of the individual states in maintaining their fiscal sovereignty. This Group, chaired by Secretary Regan, included three Governors, several state legislators and tax administrators, and seven chief executive officers of major corporations.

Working Group and Task Force Meetings

At its initial meeting in early November, the Working Group appointed a technical-level Task Force to study the issues and develop options for consideration by the Working Group. The Task Force held 145 hours of meetings spread over 20 days between November and mid-March. A large number of individuals or groups

representing business, the states, foreign governments, and public interest viewpoints presented testimony to the Task Force. The Task Force also received written statements in opposition to the states' use of the worldwide unitary method from the governments of Australia, Belgium, Canada, the Federal Republic of Germany, the Netherlands, Switzerland, the United Kingdom, the ten-member European Community, and from the European Commission.

At its early December meeting, the Working Group decided to reject immediate resort to restrictive federal legislation as a way of implementing any Working Group recommendations. This decision reflected the shared view of the business and state members of the Working Group that a cooperative voluntary approach based on consensus offered the best chance for obtaining a solution to this vexing problem.

At its last meeting, March 20-22, the Task Force completed its analysis of the testimony and material it received and its development of options for the Working Group. A report outlining the Task Force's activities, the issues which it identified, and the options it developed was presented to the Working Group on May 1.

Working Group Adoption of Principles

At its final meeting on May 1, the Working Group considered the six options that had been developed by the Task Force. Option One would apply solely to foreign-based multinational corporations while Options Two through Six would limit the unitary method to the water's edge. While Options Two through Six contain many common elements, they differ in several areas, most notably in the proper state tax treatment of dividends received by U.S. corporations from foreign subsidiaries and of U.S. corporations with predominantly foreign operations, so-called "80/20" corporations. Although the Working Group did not reach agreement on any of the six options, it was able to agree on a set of three principles to guide in the formulation of state tax policy:

1. water's edge unitary combination for both U.S. and foreign-based companies;
2. increased federal administrative assistance and cooperation with the states to promote full taxpayer disclosure and accountability; and
3. competitive balance for U.S. and foreign multinationals and purely domestic businesses..

Under Principle One, which would be implemented by state action rather than federal restrictions, unitary taxation would be applied solely to business activities within the United States. If states follow the water's edge recommendation, a foreign corporation not doing business in the United States would not be subject to unitary combination. Acceptance of this

-3-

Principle would meet the primary concerns of our trading partners and thus be responsive to the problem that gave rise to the creation of the Working Group.

Principle Two would commit the federal government to assist the states by undertaking specific actions to encourage greater disclosure of domestic income, increase compliance with state tax laws, and improve the enforcement of the arm's-length or separate accounting standard. In some cases, the information and help provided the states would be contingent upon state acceptance of the "water's edge" limitation. Several of these actions would require federal legislation, increased budgetary authority for the Internal Revenue Service, or both.

Principle Three suggests that state tax policy should maintain competitive balance among all business taxpayers, including foreign multinationals, U.S. multinationals, and purely domestic businesses.

While the Working Group reached a consensus on the above Principles, a number of issues, most importantly those dealing with foreign dividends and U.S. corporations with mainly foreign operations ("80/20" corporations), were not resolved. These issues will be decided on a state-by-state basis.

Working Group Report

A report from the Working Group to the President outlining this agreement in principle and summarizing the factual situation leading to the formation of the Working Group, the issues that divided the members of the Working Group, and the activities of the Working Group and its staff-level Task Force has been drafted and circulated to the Working Group members for review and comment. Provided it is approved by the Working Group members, it should be ready for delivery to the President by early June. Several state members of the Working Group believe that it is critical for the report to indicate more clearly the areas of disagreement. Those members appear to be unwilling to support a recommendation for state adoption of the water's edge principle without making it explicit that issues dealing with foreign dividends, "80/20" corporations, prospective application, tax havens, "safety valve" use of worldwide combination, and modification of a federal law governing out-of-state sales must be resolved to the satisfaction of the states. Treasury is attempting to accommodate these concerns while maintaining the support of the business members of the Working Group and the essence of the Group's agreement to adopt the principle of water's edge combination.

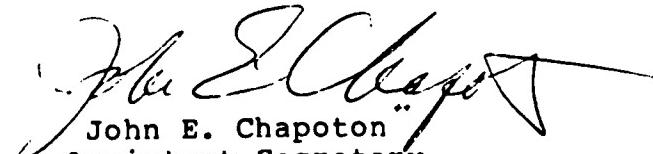
The implementation of the Working Group's water's edge recommendation (Principle One) is the responsibility of the individual states. There are clear signs that competition between the states for investment will spur them to act quickly. Recent action in two highly-visible worldwide unitary states

-4-

indicates this voluntary approach may be successful. In California, Governor Deukmejian and Senate Minority Leader Nielson have introduced Senate Bill 1937, which would allow tax-payers to elect to be taxed on a water's edge rather than worldwide basis. Foreign dividends received by a U.S. corporation opting for water's edge treatment would be subject to taxation. This bill is currently scheduled for committee hearing on June 15. In Florida, the state which adopted the worldwide unitary method only last year, House Bill 1309 has been reported out of committee and awaits floor action, where it is strongly supported by Speaker Moffitt, a member of the Working Group. This bill would provide for water's edge combination with taxation of foreign dividends. From the discussions in the Working Group, it is clear that taxation of foreign dividends is unacceptable to U.S.-based multinationals, even if coupled with a water's edge restriction on unitary combination. This is true because many U.S. companies could, in fact, have higher state tax liabilities under the proposed Florida legislation than under worldwide unitary. Given an election in California, these firms would select worldwide unitary over water's edge, with full taxation of dividends.

Further evidence of the competitive atmosphere between the states over the unitary issue can be found in recent statements by several state governors. Oregon Governor Atiyeh has indicated a desire to eliminate the use of worldwide unitary as part of Oregon's "very strong efforts to encourage economic development." Indiana officials have responded to the inclusion of their state in the list of the twelve worldwide unitary states by indicating that Indiana allows corporations to elect to be taxed on a worldwide basis, but that it is not nor will it be Indiana policy to require the use of the worldwide method to the detriment of the taxpayer. Governor Perpich has called for repeal of Minnesota's strictly domestic unitary method of taxation. In addition, Governor Clinton of Arkansas recently considered and rejected the adoption of the worldwide unitary method.

Foreign reaction to the Working Group's agreement has been "cautiously optimistic." While our trading partners are pleased with the water's edge recommendation, they have expressed their concern that failure to resolve the foreign dividends issue may interfere with the state adoption of the water's edge combination they seek.



John E. Chapoton
Assistant Secretary
(Tax Policy)

THE WHITE HOUSE

WASHINGTON

May 24, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON ECONOMIC AFFAIRS

FROM: ROGER B. PORTER *RBP*

SUBJECT: Employment Patterns and Prospects

The U.S. economy experienced strong employment growth in the 1970's by generating a net increase of almost 21 million jobs or 26 percent, representing a dramatic contrast to employment growth in other developed countries. From 1970 to 1980, Japan generated a net increase in employment of 5 million jobs or 9 percent, while most major European countries experienced little or no growth. During the 1970's, employment increased by 4 percent in France, by 0.8 percent in the United Kingdom, by 7 percent in Italy, while employment in West Germany actually declined by 2 percent.

The increase in U.S. employment over the 1970's and dramatic growth in employment in 1983 and 1984 have led to much discussion about the reasons for this growth. Many Europeans have expressed great interest in the effect that high technology has had on U.S. employment. This paper briefly analyzes the effect of high technology on U.S. employment.

Definition of High Technology

There is no clear definition of "high technology," either in terms of industries or occupations. Most definitions of high technology industries tend to focus on three major characteristics: 1) the degree of investment in research and development (R&D); 2) the utilization of scientific and technical workers; and 3) the technological intensity of the product. Most definitions consider high technology industries to be those which manufacture high technology products (e.g. computers, drugs, and aircraft), rather than those which use high tech products, since almost all industries (agricultural, manufacturing, and services) use high technology in one form or another. Most definitions of high technology occupations tend to focus on those workers directly involved in developing or applying new technologies.

Size of High Technology Employment

Using any reasonable definition of high technology, it is safe to conclude that while high technology has experienced substantial employment growth in recent years, it accounts for a relatively small proportion of total U.S. employment.

-2-

The Bureau of Labor Statistics (BLS) has analyzed the scope of high technology employment. Defining high technology employment as high utilization of technology-oriented workers (I); high R&D expenditures (II); and a combination of workers and R&D expenditures (III), BLS estimated high technology employment as follows:

<u>Employment Grouping</u>	Employment (in thousands)	
	<u>1972</u>	<u>1982</u>
All wage and salary workers	76,547.0	91,950.1
Group I	9,989.7	12,349.6
Percent of total employment	13.1	13.4
Group II	1,819.4	2,543.0
Percent of total employment	2.4	2.8
Group III	4,468.9	5,691.1
Percent of total employment	5.8	6.2

In 1982, high technology industries, depending on the definition used, accounted for between 2.8 and 13.4 percent of all wage and salary workers. Not only does high technology account for a relatively small proportion of jobs in the total economy, it also contributed relatively little to employment growth over the last decade. High technology employment did grow at a faster rate (24-40 percent) from 1972 to 1982 than total wage and salary employment (20 percent). However, the small proportion of total employment accounted for by high technology meant that it accounted for only 5 to 15 percent of the net increase in wage and salary jobs from 1972 to 1982.

The sector employing the largest number of people and generating the most number of net new jobs has by far been the service-producing sector. This sector includes transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; services; and government. The service-producing sector currently employs about 68 million people (April 1984). The service-producing sector represents about 73 percent of nonagricultural payroll employment, while creating 91 percent of the total net new jobs in the economy from 1973 to 1983.

In terms of occupations, high technology also accounts for a relatively small proportion of employment. The Bureau of Labor Statistics defines high technology occupations as those jobs involving direct development or application of new technologies, such as engineers, scientists, mathematical specialists, and computer specialists. These occupations employed about 3.3 million people in 1982, representing about 3.2 percent of total employment.

-3-

Effect of High Technology on Employment in Other Industries

High technology affects employment not only by directly providing jobs for workers manufacturing high technology products, but also by improving labor productivity in other industries. There are at least two ways in which to consider the effects of enhanced labor productivity:

1. It may decrease employment by: a) reducing the number of workers required to produce the same amount of output as before; and b) making obsolete other products and thus causing unemployment in the affected industries.
2. Higher labor productivity can increase employment by: a) generating greater wealth and thus demand for more goods and services; and b) enhancing the competitiveness of the affected industry and thus generating new job opportunities. Moreover, many innovations lead to new employment for those who produce and maintain new technologically advanced equipment.

Despite continued assertions that technological advances cause employment declines, technological change in general has historically coincided with employment growth. High technology can increase employment in two ways. First, it results in higher real earnings and expansion of the economic pie, which generates demand for other goods and services and employment in those industries.

Second, it makes an industry more competitive and thus creates more jobs from larger sales than the jobs lost because of greater efficiency. Robert Lawrence conducted a study which found that high technology production processes have, over the long-term, helped increase employment even in manufacturing. Between 1973 and 1980, output in manufacturing industries characterized by high technology production processes increased by 30.6 percent while employment rose by 15.7 percent. In contrast, output in industries characterized as resource intensive grew sluggishly and employment declined.

Financial services is an example of an industry characterized by technology advances in which employment has increased. Greater use of automated teller machines has not resulted in a loss of jobs in commercial banking. In fact, employment in commercial banking increased from 1.1 million in 1972 to over 1.5 million in 1983, an average annual increase of 2.9 percent which compares favorably with the average annual increase of 1.9 percent for the economy as a whole.

-4-

High technology has significantly enhanced productivity in many industries. Examples include:

- Continuous casting, which requires computerized control, in U.S. steel mills increases the yield of finished steel from a given volume of raw steel as well as reduces energy consumption.
- Computer-aided design reduced by at least 75 percent the time it takes for General Electric to design tools for manufacturing jet engines.
- Computer-aided design reduced the time it took for General Motors to redesign a single automobile model from 24 months to 14 months.
- Flexible manufacturing systems allow Deere & Co. to build a tractor at least twice as fast as before.

Implications for Government Policy

The strong growth in total employment in the U.S. has been achieved without government planning. Government targeting of public resources to achieve growth would have been ineffective in any case since government is unlikely to be capable of outguessing the market over the long-term. An example of the government's inability to outguess the market is the BLS forecast for occupational growth. In 1970, BLS projected the likely number of jobs in major occupations by 1980. Some of the projections included:

	BLS 1970 projection of 1980 level	Actual 1980 level
Telephone operators	480,000	299,000
Psychologists	56,000	106,000
Lawyers and judges	342,000	539,000
Typesetters	165,000	165,000
Bartenders	200,000	311,000
Bank tellers	337,000	506,000
Optometrists	21,000	20,900

-5-

If the Federal Government had allocated public resources to train people for jobs based on the 1970 projections, it might well have created by 1980 a large pool of highly trained people for jobs that did not exist.

Conclusions

In discussing U.S. employment growth patterns and prospects, particularly as they relate to high technology, it is useful to emphasize the following:

- o The U.S. economy has experienced much technological change in recent years with new products and processes now available as a result of technological innovations.
- o These technological changes, on balance, have increased our capacity to produce goods and services without reducing overall employment. Technological change often leads to reallocating employment between and within industries. The U.S. experience demonstrates that technological change and employment growth are compatible and can be achieved simultaneously.
- o While high technology industries have attracted much attention, the great growth in employment in the United States is not due principally, or even substantially, to high technology industries. Employment growth in high technology industries has grown more rapidly than for the economy as a whole, but its share of total U.S. employment remains relatively modest.
- o The large growth in employment in the United States, remarkable in comparison with other industrialized countries, has occurred without governmental programs designed to shift resources from one sector of the economy to another or to stimulate high technology industries. We have instead relied principally on the market to allocate resources and are continuing to seek to create the conditions, through appropriate fiscal and monetary policies, for sustained non-inflationary economic growth.